

**Staff Report for Cultural Resources in Response to SUWA Petition filed
December 22, 2006**



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1.0 Introduction

On December 23, 2006, the Southern Utah Wilderness Alliance (SUWA) submitted a petition (entitled “Petition to Preserve Arch Canyon’s Natural and Cultural Heritage”) to the BLM’s Monticello Field Office (BLM). The SUWA Petition requested the BLM to close Arch Canyon to motorized vehicle use. Among other things, the Petition contended that motorized vehicle use in Arch Canyon, including off-highway vehicle (OHV) use, was damaging cultural resources in the Canyon. On June 4, 2007, the BLM denied the Petition. SUWA responded by filing a lawsuit in federal district court to challenge the BLM decision. On February 17, 2010, while the lawsuit was ongoing, SUWA and the BLM entered into an agreement providing that the BLM would reconsider the Petition and issue a new decision that would supersede the June 4, 2007 decision. Concerning cultural resources, the BLM agreed to: “Assess the effects of motorized vehicle use on cultural resources in Arch Canyon by reviewing relevant literature and the results of the Class III archeological inventory information currently being collected on a 100-foot corridor bisected by the Arch Canyon road. The BLM shall also undertake and consider the results of a Class III archeological inventory of three sites outside the 100-foot corridor that the BLM is aware are visible from the road, and will consult with SUWA to determine whether there are other sites that because of visibility and accessibility should be inventoried.” (Agreement, paragraph 1.C)

The purpose of this report is to summarize the work that was undertaken in connection with the Agreement and, based on that work, assess the cultural resources contentions in the Petition. Specifically, this report will determine whether motorized vehicle use is causing or will cause considerable adverse effects to significant cultural resources in the Canyon, provide a recommendation on the Petition, and recommend actions to protect cultural resources. Significant cultural resources are those cultural sites that are eligible for listing in the National Register of Historic Places. Isolated artifacts, for example, are not considered significant cultural resources; however, they are protected by law. This report discusses known significant or eligible cultural sites in Arch Canyon, considers information provided in the Petition, reviews other available relevant information and studies and information, responds to specific contentions in the Petition, reaches conclusions, and makes recommendations. No maps or site numbers of cultural resources are used in this report since this information cannot be disclosed to the public.

Arch Canyon increases in depth as one goes up the Canyon and has massive cliffs well over a thousand feet high. There is a perennial, flowing creek and a riparian area in the bottom, and springs and seeps at several locations in the canyon cliffs. There are cliff dwellings, granaries, rock art, and other archaeological sites. The geological formations include “hoodoos” or unusual spires, multi-colored sandstone, and arches. There are remnant stands of Douglas fir and ponderosa pine that are usually found at higher elevations. The Canyon also has a gentle canyon

floor without the pour-offs that characterize many local canyons, making it accessible for OHV use, hikers, bicyclists, and equestrians.

BLM management of the cultural resources in Arch Canyon began in the 1950s with an intuitive inventory and the recording of some of the most obvious archaeological sites (Weller, Ted 1959). In 1964, the BLM fenced the Arch Canyon Ruin, located near the mouth of Arch Canyon, to stop vandalism, erosion, and damage from cattle. In 1965, the BLM conducted an intuitive survey in the Canyon and recorded additional sites. In 1989, a survey of the route did not locate any sites that would be impacted by OHV use (Davidson 1989). Arch Canyon was closed to grazing in 1992. In 2000, the large Arch Canyon Ruin site was recorded with greater detail (Hurst et al. 2001). Recent management issues have revolved around recreational use by equestrians, hikers, and OHVs.

The BLM management of Arch Canyon today is much different than it was in 2006, when SUWA submitted its Petition. Since 2007, two cultural resource sites are being regularly monitored by Site Stewards for any adverse effects, and a third site has just been added to the monitoring program. In 2008, the BLM Monticello Field Office Resource Management Plan (RMP) was completed. Among other things, the travel plan component of the RMP restricted OHV use to the existing designated route in Arch Canyon and closed all spur routes. In addition, periodic monitoring is being done by BLM law enforcement, recreation staff, and site stewards.

The RMP designated Arch Canyon as part of the Cedar Mesa Special Recreation Management Area (SRMA). The RMP included management decisions which will prevent adverse effects to cultural resources, and these decisions are as follows:

- OHV use in Arch Canyon is limited to the designated route up to the USFS boundary year-round. (RMP TM-16)
- Domestic pets and pack animals will not be allowed in cultural sites or on archaeological resources as defined by the Archaeological Resources Protection Act (ARPA). (RMP CUL-18)
- Ropes and other climbing aids will not be allowed for access to cultural sites or archaeological resources as defined in ARPA, except for emergencies and administrative needs. (RMP CUL-19)
- Camping will not be allowed within cultural sites or archaeological resources as defined in ARPA. (RMP CUL-20)
- Cultural sites may be closed to visitation when they are determined to be at risk or pose visitor safety hazards. (RMP CUL-21) The riparian areas in Arch Canyon have a no surface occupancy stipulation for oil and gas leasing and as a result are closed to all other surface disturbing activities. (RMP RIP-3)

The designated OHV route in the Canyon is utilized for OHV, hiking, biking, and equestrian use. The RMP process included consultation with the State Historic Preservation Office (SHPO) and its concurrence was granted for designation of the route in Arch Canyon.

2.0 Known Significant Cultural Resources Sites

The cultural resources in Arch Canyon are varied and numerous. Cultural resources known in the Canyon include several types of prehistoric and historic time period sites, and it appears that the Canyon was used for at least the last 1,500 years. Especially obvious are the cliff dwellings and granaries of the Ancestral Puebloans or Anasazi that were mainly used during the A.D. 900-1280 time period, or PII and PIII using the Pecos classification which archaeologists usually use. Granaries are small, usually less than 1.5 m. or 5 ft. tall, stone masonry structures that were often used to store food, especially corn.

In the late PIII time period, between 1240 and the 1260s, populations moved into either very large pueblos or smaller cliff dwellings that are often very difficult to access and thought, by some archaeologists, to have been defensive sites. Great Kivas are thought to be “public architecture” where numerous people congregated for religious, social, and political meetings. One of these large structures has been found in Arch Canyon. Rock art sites with pecked petroglyphs and painted pictographs are present at various places in the Canyon. Some rock art sites are thought to be some of the oldest sites identified to-date. Artifact scatters with ceramic pottery sherds and stone lithics are often associated with a variety of sites. Artifact scatters are often associated with pit houses and other habitation sites where people lived, at least temporarily. Since corn cobs are present at several sites, future intensive inventories will likely identify fields, check dams, and agricultural artifacts such as stone hoes. Midden or trash areas of sites are very valuable sources of archaeological data.

There are 38 known significant cultural resources sites in and at the mouth of Arch Canyon. There are 33 sites that have been previously recorded and 5 new sites that were discovered by the BLM in 2010. The recent (2009) Class III inventory included the entire route, and sites readily accessible and visible from the road have previously been inventoried. The canyon floor outside of the 30 m. or 100 ft. wide corridor of the route, cliffs, and ledges have not been inventoried at the Class III level. The level of inventory in the canyon floor area is unknown. There are probably several unrecorded sites in the canyon floor area, cliffs and ledges, in areas that have not received Class III intensive inventory. Besides the two early, unsystematic, intuitive inventories mentioned above on page 2, an additional intuitive survey of 0.7 miles located nine new sites, and during an effort to revisit nine previously recorded sites, five additional sites were recorded. (Spangler 2006). The known sites in and at the mouth of Arch Canyon have been placed in “types” in Table 1. that reflect the major feature(s) present and/or possible use of the sites.

Table1. Known Site Types in or at the Mouth of Arch Canyon

Number of Sites	Site Type
10	Storage granary with stone masonry architecture
8	Cliff dwelling habitation
5	Open habitation
4	Rock art petroglyphs and/or pictographs
3	Rock alignment
2	Hearth
1	Great Kiva with artifact scatter
1	Rubble mound
1	Sweat lodge
1	Culturally modified tree
1	Quarry
1	Historic time period ditch
Total 38	

3.0 Information Provided in the SUWA Petition

The SUWA Petition bases most of its cultural resource contentions on a site condition and vandalism assessment that was completed by archaeologist Jerry D. Spangler (Spangler 2006) (Petition Exhibit B). The Petition contends that there are adverse impacts occurring to cultural resources in Arch Canyon, and that these impacts, such as looting, graffiti, illegal collection of artifacts, and erosion of areas in and around sites, are the result of OHV use. The Petition also relies on information from other sources including the BLM (2000, 2007, 2009), the National Trust for Historic Preservation (Destry 2006) and (Moe 2006), the Southern Utah Wilderness Alliance (SUWA 2002), and declarations from two individuals (Kent 2006) and (Schalk 2006). The contentions in the Petition are addressed in detail in section 6.0, Table 2, and section 7.0, Conclusions and Recommendations, of this report.

4.0 BLM Review of Available Information

All available, relevant information was reviewed in considering and addressing the contentions in the SUWA Petition concerning cultural resources. This information included certain Exhibits attached to the Petition, the RMP, reports, communications (email, letters, telephone conversations), assessments, and monitoring data. This information is referenced as follows:

BLM 2000, Strategic Paper on Cultural Resources “At Risk”. Information Bulletin No. 2000-136. Bureau of Land Management, Washington, D.C. (also Exhibit I of the Petition).

BLM 2006, Conversation Report between BLM Monticello Field Office staff and San Juan County Planning and four emails among BLM Monticello Field Office staff concerning the washed out ORV route in Arch Canyon after a flood event in October of 2006. Documents on file at the Monticello Field Office, Bureau of Land Management, Monticello, UT. (also Exhibit G of SUWA Petition).

BLM 2007, Permitted Jeep Use of Arch Canyon and the Hotel Rock Area, Environmental Assessment, UT-090-07-10, February 20, 2007, Monticello Field Office, Bureau of Land Management, Monticello, UT.

BLM 2008, Record of Decision and Approved Resource Management Plan. BLM-UT-PL-09-004-1610, Ut-090-2007-40, November 2008. Monticello Field Office, Bureau of Land Management, Monticello, UT.

BLM 2010a, BLM email between managers documenting consultation with SUWA for clarification of Section 1.C of the Arch Canyon Final Draft Settlement Agreement between the BLM and SUWA. Email On file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

BLM 2010b, BLM email between Donald E. Simonis and BLM management concerning clarification of Section 1.C of the Arch Canyon Final Draft Settlement Agreement between the BLM and SUWA. Email on file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

BLM 2010c, Monitoring data for sites monitored in Arch Canyon by the Site Steward Program. Data sheets on file at the Edge of the Cedars Museum, Blanding, UT.

BLM 2010d, Monitoring data Arch Canyon Visitation Statistics 2004-2010. On file in the BLM Monticello Field Office, Monticello, UT.

Cole, Sally 2004, Sketches, photographs, notes, and maps of the Black Bear Cave site. Documents on file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

Cole, Sally 2010, personal communication, telephone conversation with BLM MFO archaeologist Donald E. Simonis.

Davidson, Dale 1989, Arch Canyon Road Survey. Manuscript on file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

Hopi Tribe 2007, Letter to the Monticello Field Office dated January 24, 2007. Bureau of Land Management, Monticello, UT.

Hurst, Winston 2010a, Draft Interim Report of Selected Findings, Arch Canyon (ARC) Block, Comb Ridge Heritage Project. Manuscript on file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

Hurst, Winston 2010b, personal communication, telephone conversation with BLM MFO archaeologist Donald E. Simonis.

Hurst, Winston, Ann Phillips and Nancy Shearin 2001, 42Sa5271, IMACS form on file, Utah Division of State History, Salt Lake City, UT.

Irwin, Don 2010, personal communication, telephone conversation with BLM MFO archaeologist Donald E. Simonis.

Jarvis, T. Destry 2006, Cultural Resources On the Bureau of Land Management Public Lands: An Assessment and Needs Analysis. Paper prepared for the National Trust for Historic Preservation. (also Exhibit C of SUWA Petition).

Kent, Dan 2006, Signed declaration concerning impacts to natural and cultural resources in Arch Canyon due to ORV use. Copy of declaration on file, Monticello Field Office, Bureau of Land Management, Monticello, UT. (also Exhibit L of the Petition).

Lantz, Laura 2008, BLM Ranger photographs of the Black Bear Cave site taken in May of 2008. Photographs on file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

Lantz, Laura 2010, personal communication, telephone conversations with BLM MFO archaeologist Donald E. Simonis.

Larmore, Sean and Kathleen Croll 2010, Draft Class III Cultural Resources Survey Arch Canyon Road Inventory, San Juan County, Utah. Report on file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

Moe, Richard 2006, Historic Preservation: An Unfinished Agenda in the West. Speech presented to the City Club of Denver. http://www.nthp.org/news/2006/20060516_speech_denver.html. (also Exhibit D of the Petition).

Naylor, Laird 2010, email report on results of revisiting 10 archaeological sites in Arch Canyon, Email on file, BLM Monticello Field Office, Monticello, UT.

Navajo Utah Commission (NUC) 2007, Letter to the Monticello Field Office dated February 26, 2007. Bureau of Land Management, Monticello, UT.

Schalk, Lynell 2006, Signed declaration concerning impacts to natural and cultural resources in Arch Canyon due to ORV use. Copy of declaration on file, Monticello Field Office, Bureau of Land Management, Monticello, UT. (also Exhibit M of SUWA Petition).

Shearin, Nancy 2010. Interview and examination of site forms and photographs to verify the three sites that are visible from the OHV route that BLM knows about. Interview document, Monticello Field Office, Bureau of Land Management, Monticello, UT.

Spangler, Jerry D. 2006, Site Condition and Vandalism Assessment of Archaeological Sites, Lower and Middle Arch Canyon, San Juan County, Utah. State Project No. U-06-C1-0548. (also Exhibit B of SUWA Petition).

Spangler, Jerry D., Shannon Arnold and Joel Boomgarden 2006, Chasing Ghosts: An Analysis of Vandalism and Site Degradation in Range Creek Canyon, Utah. Utah Museum of Natural History Occasional Papers 2001:1. Salt Lake City, UT.

Spangler, Jerry D., Andrew T. Yentsch, and Rachelle Green 2009, Farming and Foraging on the Southwestern Frontier, Colorado Plateau Archaeological Alliance, Ogden, Utah; National Trust for Historic Preservation, Washington, D.C.

Spangler, Jerry D. and Andrew T. Yentsch, 2010, Cultural Resources Investigations Along OHV Routes in Kane, Wayne, and San Juan Counties, Southern Utah. Colorado Plateau Archaeological Alliance, Ogden, UT.

SUWA 2002, Preserving Prehistory. Southern Utah Wilderness Alliance, Paper on file at the Monticello Field Office, Bureau of Land Management, Monticello, UT, (also Exhibit J of SUWA Petition).

SUWA 2006, Petition To Preserve Arch Canyon's Natural and Cultural Heritage. Submitted by: Southern Utah Wilderness Alliance, Navajo Utah Commission, Great Old Broads For Wilderness, Far Out Expeditions, Wild Rivers Expeditions, Calf Canyon Bed & Breakfast. Petition on file, Monticello Field Office, Bureau of Land Management, Monticello, UT.

Weller, Ted 1959, San Juan Triangle Survey, In, *The Glen Canyon Archaeological Survey: Part II*, by Don W. Fowler et al. pp. 543-675. University of Utah Anthropological Papers No. 39, Glen Canyon Series No. 6. Salt Lake City, UT.

Zuni Tribe 2010a, personal communication with BLM, meeting held at Black Rock, NM.

Zuni Tribe 2010b, personal communication with BLM, telephone conversation between Kurt Dongoske, Tribal Historic Preservation Officer and Director of the Zuni Heritage and Historic Preservation Office and Donald E. Simonis, BLM MFO archaeologist.

5.0 Additional Studies and Information

Since SUWA submitted its Petition to the BLM in 2006, Arch Canyon has been visited by BLM archaeologists Laird P. Naylor II, Donald E. Simonis, and former BLM archaeologist Shelley Smith. Additional information on cultural resources in the Canyon was collected by interviews with six professional archaeologists. In 2007, the BLM prepared an Environmental Assessment

(EA) for a Jeep Jamboree, an OHV event in Arch Canyon, and, information was received from the Hopi, Navajo, and Zuni tribes in connection with the Jeep Jamboree and OHV use in Arch Canyon. In addition, Class III inventories have been completed for a block of land around the mouth of Arch Canyon (Hurst 2010a), the entire 8.5 miles of the OHV route designated in the RMP (Larmore and Croll 2010), and three segments of other OHV routes in the Cedar Mesa area (Spangler et al. 2009) and (Spangler and Yentsch 2010). These additional studies have provided important information for, among other things, assessing the contentions in SUWA's Petition about impacts and /or risks of OHV use to the cultural resources in Arch Canyon. Each of these studies will be discussed and evaluated in this report.

5.1 Information from Archaeologists.

Archaeologists with previous experience in Arch Canyon were interviewed and asked if they knew of any additional sites or information that might assist in assessing the impacts of OHV use on cultural resources in the Canyon. These archaeologists included Laird Naylor, BLM Monticello Field Office (MFO); Dale Davidson, BLM MFO retired; Nancy Shearin, BLM MFO retired; Don Irwin, Manti-LaSal National Forest, Monticello, Utah; Sally J. Cole, Rock Art Researcher, Dolores, Colorado; and Winston Hurst, private contractor, Blanding, Utah.

5.1.1 2010 personal communication with Sally J. Cole.

Some of the most important new information came from Sally J. Cole (Cole 2010). Ms. Cole is widely acknowledged as being the expert on rock art sites in southeastern Utah and much of the greater Southwest. She has written numerous books and articles, and she spent nine years conducting an Earthwatch project studying and recording rock art and producing 3,000 drawings and over 11,000 photographs of rock art in southeastern Utah. The new information from Ms. Cole concerns two sites in Arch Canyon, one previously recorded, and a new site which has never been reported or discussed in print before this report.

The previously recorded site mentioned above is referred to in this report as the Duck Stick site, and it is located 92 m. or 300 ft. from the designated OHV route in Arch Canyon at a point where the canyon floor meets the cliff. The site was discovered and recorded by Jerry Spangler in 2006. The site is primarily a pictograph rock art site with unusual carved wooden sticks that were found on the surface. The site was revisited by a BLM archaeologist in the Spring of 2010 to confirm that the artifacts were still cached at the site and were in good condition. The site was found to be as Spangler described it with no evidence of any adverse effects. Two additional glyphs were observed and other carved sticks were found. Ms. Cole believes that the site is important for its dating potential between wooden artifacts and rock art style (Cole 2010).

Another very significant rock art site in Arch Canyon about which Ms. Cole presented information is known by locals as the Bear Cave and will be referred to in this report as the Black Bear Cave site, which name more accurately denotes the large, life-size black-painted pictograph that is the most obvious feature of the site. The site is in a large approximately (90 m.

or 295 ft. x 30 m. or 98 ft.), arc-shaped alcove or cave and has numerous pictographs (Cole 2004).

Dale Davidson, BLM MFO archaeologist retired, related that he did know of the site and thought it was very significant. He said there had been activity by Boy Scouts near the site. He said he did not think the site had been recorded in detail except for what Ms. Cole has done which is the completion of a site sketch map, sketches of rock art present, and photographs (Cole 2004).

The Black Bear Cave site is located near the rim of Arch Canyon and is not easily accessible from the OHV route in the canyon bottom. The site is probably being accessed from a dirt road on the canyon rim which is less than ½ mile from the site. There is evidence of on-going graffiti at the site (Lantz 2008 and 2010). The site, according to people who know of it, has been a party location for young people for several decades. This site shows that there are additional significant sites in Arch Canyon that will require special management in the future.

A field visit by the BLM in July of 2010 to the Black Bear Cave site area resulted in the discovery of two stone masonry houses and smaller possible storage rooms and granaries located on three different ledges in the canyon wall. The eight structures make up at least three (depending on how they are divided) new sites that no archaeologist has recorded to date. This suggests that there are probably several more sites along the ledges in Arch Canyon that cannot be seen from the bottom. Along with the Black Bear Cave site, there are at least four newly discovered sites in this part of the canyon.

5.1.2 2010 Draft Interim Report by Winston Hurst.

The following information is from Winston Hurst's 2010 draft interim report of selected sites in and at the mouth of Arch Canyon. The significant cultural resources sites were located in a ½ mile square area or 160 acres. (Hurst 2010a). This work is part of the massive Comb Ridge Heritage Initiative Project that has been ongoing for the past five years. The information in the draft interim report is especially pertinent to this report because it is derived from the area of greatest visitation. In addition to hikers, bicyclists, and equestrians, two-wheel drive, low clearance vehicles can access much of this area, which may be a key contribution to the heavy recreational use which is often observed during the spring and fall seasons (BLM 2010d).

In the 2010 draft interim report, Mr. Hurst describes seven sites consisting of five habitation sites with stone masonry architecture, a quarry/lithic scatter, and a historic ditch and structure. Each of the five habitation sites showed evidence of looting and surface collecting, four of the five sites had severe pedestrian trampling, three of the five had graffiti, and one of the five had direct impacts by vehicles with ATV tracks within the site boundary.

At the Arch Canyon Ruin, which the largest site known in the Canyon, located near the mouth, and thought to be a Chacoan Great House, visitors have stripped off most of the surface artifacts.

The site was fenced by the BLM in 1964. Evidence of looting is minimal but, as Mr. Hurst stated, this is likely due to “healing” of pot holes as a result of trampling and natural processes.

At a nearby site, visitors have reworked ancient building rubble into what appears to be a kids’ fort. In the 2010 draft interim report, Mr. Hurst states, “Clear looter pits are evident in the northwest corner of the central room block and in several places on the north slope of the central rubble mound. The largest has left a substantial crater that has taken out part of the north wall, rubble from which has been informally restacked in the north side of the pit to create something resembling a partly-walled foxhole. Rubble from the structure has also been used to create a recent latrine on the northern side of feature 1 below the central room block. This construction, which was not assigned a feature number, consists of several tabular blocks pulled from the room block and stacked against an old pinyon stump in a seat-like situation” (Hurst 2010a).

The sites in the mouth of Arch Canyon are thought to be associated with a prehistoric Chacoan road that approaches from the south. A couple of the sites are thought to have been portal or guardian sites for entrance into Arch Canyon. The mouth of the canyon area is where the heaviest impacts have occurred, but, there was nothing observable indicating that the impacts were caused by OHV use except for the one site with ATV tracks within the site boundary.

5.1.3 2010 Communication with Don Irwin.

Mr. Don Irwin, Manti-LaSal National Forest (U.S. Forest Service) archaeologist, who manages cultural resources in the upper part of Arch Canyon adjacent to the BLM-managed land in the lower 8.5 miles of Arch Canyon, was asked if he knew of any sites down canyon on the BLM-managed land. He replied that he did not, but that he had observed a large alcove down canyon which may or may not be the Black Bear Cave site Irwin (2010).

5.2 Site visits

5.2.1. 2010 field visits by Laird Naylor.

In the Spring of 2010, Laird Naylor, BLM MFO archaeologist, made field visits to ten of the sites that Jerry Spangler inventoried in 2006 (Naylor 2010). The purpose of these field visits was to assess whether any impacts had occurred since 2006. The ten sites selected included six small structural sites (granaries or remnants thereof), three rock art sites, one artifact scatter, and one multi-room cliff ruin. The multi-room cliff ruin is counted twice in the list, as it also contains rock art.

None of the ten sites showed any impacts since 2006 except for the multi-room ruin. However, since there were no baseline data concerning artifacts on the surface, it was impossible to determine if illegal collection of artifacts had taken place. Available photographs from 1965 and 2006 shows the loss of some masonry mortar, loss of some wall topping stones, and a few visitor added stones. One visitor-added stone visible in the 2006 photographs was gone in 2010. A

hearth in one structure has been partially excavated without authorization by parties unknown, and the depth appears to be greater than that visible in the 2006 photographs.

Mr. Naylor also observed a granary site on a ledge in the canyon wall that has not previously been recorded. This suggests that there may be other sites on ledges that can only be viewed from elevations out of the canyon bottom and/or from locations on the opposite side of the canyon.

5.2.2 2010 BLM field visit to the Great Kiva site.

In the Summer of 2010, BLM archaeologist Donald E. Simonis revisited a site on the canyon floor approximately five miles up the canyon that Mr. Spangler found. This site will be referred to in this report as the Great Kiva site. The large circular depression at this site measures slightly over 14 m. or 46 ft. in diameter. This is a huge structure by prehistoric standards and is the same size as the Great Kivas at Lowry Pueblo and Mitchell Springs in southwestern Colorado. Both Lowry Pueblo and Mitchell Springs have large stone masonry, multi-room Pueblo room blocks associated with them. There is no stone masonry, Pueblo room block at the site in Arch Canyon. Isolated Great Kivas are rare with only two having been identified in southeastern Utah (Hurst 2010b). There was no evidence of looting at this site. The Great Kiva is located 30 m. or 100 ft. from the OHV route and is not visible from the route.

5.2.3 Monitoring in connection with the 2007 EA on the Jeep Jamboree.

On February 20, 2007, the BLM completed an Environmental Assessment (EA) for a Jeep Jamboree that was to take place in Arch Canyon (BLM 2007). Several stipulations were placed in the Finding of No Significant Impact and Decision Record to ensure that there would be no impacts to cultural resources from the OHV event. The area of potential effect (APE) was defined as the route and areas where secondary (indirect) and cumulative impacts to cultural resources could occur, including the canyon bottom and cliffs/benches. One of the five stipulations dealt with the secondary (indirect) and cumulative impacts. This stipulation provided that cultural resources (archaeological sites) within the APE would be monitored by Site Stewards on a systematic schedule. This stipulation was further defined to cover highly visible and frequently visited sites. The Utah State Historic Preservation Office (SHPO) agreed with the BLM's determination of No Adverse Effect for the undertaking.

A review of the Site Steward program monitoring records shows that two sites in the past three years have been monitored and these two sites are in the canyon bottom near the mouth of Arch Canyon. No evidence of recent looting or graffiti has been observed. BLM archaeologists monitored sites in the canyon in the Spring and early Summer of 2010 and, recently, (August 2010) a site steward has been assigned to the Duck Stick site.

5.3 Cultural Resource Inventories.

5.3.1 Class I inventory of Greater Cedar Mesa area.

In 2009, a Class I overview of the previous research of the archaeological and historical resources of the greater Cedar Mesa area was completed (Spangler et al.). Part of the Class I included the results of a g, Class III inventory for three segments of OHV roads in other parts of the Cedar Mesa SRMA (Spangler and Yentsch 2010). Some of the 14 identified sites were receiving direct adverse effects as a result of OHV use. The situation is quite different from Arch Canyon where only one site is minimally being affected in part of a site where no features or artifacts are present except for a single ceramic sherd in the OHV route.

5.3.2 2009 Class III inventory by Sean Larmore and Kathleen Croll.

In November of 2009, archaeologists Sean Larmore and Kathleen Croll of ERO Resources Corp. conducted a Class III intensive survey of the 100-foot corridor bisected by the (entire) 8.5 miles of the RMP-designated OHV route in Arch Canyon (Larmore and Croll 2010). Four new sites were documented, and the BLM has accepted their work and significance recommendations. Two of the sites are new site types not previously identified in Arch Canyon. The two new site types are a “peel tree” or scarred ponderosa pine showing cultural use of bark, and a sweat lodge which was and is commonly used by both Navajo and Ute tribes for cleansing, health, and spiritual purification ceremonies.

The peel tree site is a ponderosa pine that has been culturally modified by making cuts near the base of the tree about 80 cm. or 32 in. in length and 20 cm. or 8 in. in width and then peeling the bark away. The cuts appeared to have been made with a metal axe. Peeled ponderosa trees are typically ascribed to the Ute, although other ethnic groups are known to have used ponderosa bark. The inner cambium below the outer bark was used as starvation food and studies have shown that one pound provides 600 calories. The inner bark was also used for medicinal purposes and as part of the construction of cradle boards.

Peeled ponderosa trees are extremely rare in southeastern Utah and are usually found at higher elevation settings than Arch Canyon. Arch Canyon is unique in having a remnant population of ponderosa pine, which begins at an elevation of approximately 5,000 feet.

The sweat lodge was found on a bank above the creek in the canyon bottom, which provided the necessary water for the structure. Water was poured over the heated stones that were brought inside of the low structure and a dense steam was produced. The sweat lodge is composed of two main, forked juniper log supports with about 35 juniper limbs leaned against the main supports to form the outer walls. The whole structure was probably covered with bark and mud to seal the walls. The above two sites do not appear to be in danger of direct impacts from ORV use, with one located across the creek on the opposite bank of the designated route and the other being a tree that is not directly on the route.

The other two sites that were located during the Class III inventory of the 100-foot-wide corridor along the OHV route in Arch Canyon, are a small artifact scatter with an associated sandstone slab feature, and a large double component site that the route cuts through. The first site (artifact scatter) does not appear to be the type of site that would interest most people and it is several meters/feet to the side of the route. However, this site is at some risk for OHV use impacts because it is located at a point along the route where it would be very easy to drive off the route and onto the site, thereby causing direct impacts. However, mitigation actions such as rock placement, brush barriers, and signage, which this report recommends, could be easily implemented to reduce this risk.

The large (67 x 51 m. or 220 x 167 ft.), double component site consists of an early component dating to the BM III early PI period (A.D. 500-800) and a later PII- early PIII (A.D. 900-1150) Prudden Unit Pueblo. Both components also have associated artifact scatters.

The early component of the double component site has a slab-lined structure with an associated artifact scatter and is mainly located 11 m. or 36 ft. northeast of the OHV route in Arch Canyon, but the artifact scatter extends across the route to the southwest over a 10 m. or 33 ft. by 30 m. or 100 ft. area. The artifact scatter density in the area southwest of the route is very low (<1 artifact per 5 sq. m.) with a total of four sherds and three lithics observed by the BLM in 2010. One additional sherd was observed in the route.

The second, later component of the double component site is a stone masonry Prudden Unit which is very typical of the PII time period. The site has artifacts such as decorated pottery sherds and at least one complete projectile point (probable arrowhead) that are susceptible to illegal collection. The risk for this illegal collecting is high due to artifacts from the early component extending to the later component in a “trail of artifacts” that can easily be followed from the route.

This large, double component site is the only site on the route in Arch Canyon that is being directly impacted by OHV use. However, the impacts to the site are minimal. The area of the site through which the route passes has a very sparse artifact scatter. Only eight artifacts were observed in this area with only one ceramic sherd being directly impacted in the route. The nearest feature is 11 m. or 36 ft. northeast of the OHV route. None of the architectural structures is being impacted.

5.3.3 2010 Class III inventory by BLM of three sites.

Paragraph 1.C of the Arch Canyon Agreement between the BLM and SUWA provided in part that: “The BLM shall also undertake and consider the results of a Class III archaeological inventory of three sites outside of the 100-foot-wide corridor that the BLM is aware are visible from the road and will consult with SUWA to determine whether there are other sites that because of visibility and accessibility should be inventoried”.

Concerning the three sites, I learned that the wording in the Agreement was based on a statement that former BLM archaeologist Nancy Shearin had made to Mr. Spangler. Ms. Shearin advised me that she had told Mr. Spangler that there were two or three sites that are visible from the road (BLM 2010b). I interviewed Ms. Shearin and together we examined existing site forms and photographs to identify and determine if the sites had previously been recorded. Ms. Shearin was able to positively identify the three sites and all three sites had previously been recorded and had existing site forms and photographs. The three sites are:

- 1) Arch Canyon ruin
- 2) The Spangler site
- 3) The Inaccessible granary

The BLM revisited two of the three sites and recorded any recent evidence of adverse effects. The Arch Canyon ruin in the mouth of the canyon area was found to have a recent spur road off of the designated route that is impacting the midden area of the site. The spur road was apparently not present in 2000 when Hurst recorded the site (Hurst et al. 2001). Foot-trails are also impacting the midden in some areas.

The Spangler site is a cliff granary with associated rock art that was first recorded in 1965 and revisited by Mr. Spangler in 2006. The 2010 BLM revisit of the site shows no evidence of visitation or adverse effects and the site is essentially the same as it was in 1965.

The inaccessible granary was photographed from below and appears to be as it was in a 1965 photograph. The granary is in an opening of a vertical cliff face and is inaccessible. The site is visible from the OHV route but, is approximately 600 vertical feet above the canyon floor and in an inaccessible opening 20 feet above the nearest ledge. The site was plotted in 1965 and 2006 as being located on state land. The correct location verified by GPS and compass bearing is approximately 0.3 miles down canyon and is on BLM/public land.

5.3.4 Contact with SUWA on other possible inventories.

As mentioned above, part of Paragraph 1.C of the Agreement between the BLM and SUWA provided that the BLM would consult with SUWA to determine whether there were other sites that should be inventoried based on their visibility and accessibility from the OHV route in the Canyon. On February 23, 2010, the BLM contacted SUWA by telephone to learn what other sites SUWA believed fit that criteria and should be inventoried. The reply was “those sites in the petition report, about 15 sites” (BLM 2010a).

Only five sites, not 15, that were visible from the trail were not visited by Mr. Spangler. The sites were basically recorded with the aid of binoculars but, they were not visited by Spangler because they were located high in the cliffs and inaccessible and/or there were time restraints that did not allow time to deal with these sites. BLM field visits to the canyon in 2010 determined that access to the sites would indeed require climbing safety equipment at four of the five sites, leaving only

one accessible site that was not visited due to time restraints. This site is the Block Head site and is named for a very large prominent rock on top of the cliff. The site is in the upper part of Arch Canyon about six miles from the mouth of the canyon and consists of 20 structures including habitation rooms, granaries, and extensive rock art with both pictographs and petroglyphs located on ledges in the cliff face. The site was visited by BLM archaeologists Laird Naylor, Shelley Smith, and archaeological assistant Cliff Giffen. Additional data was collected for an update of Spangler's 2006 site form. The site shows no evidence of recent visitation and there are no signs of adverse impacts occurring.

5.4 Information from Native American Tribes.

5.4.1 Hopi Tribe and Navajo Utah Commission.

In 2007, the BLM received letters from the Hopi (Hopi Tribe 2007) and the Navajo (Navajo Utah Commission (NUC) 2007). The Hopi supported the SUWA Petition and requested that the BLM implement an immediate interim closure of the Arch Canyon road. The Hopi did not identify any specific sites of cultural or religious significance in the Canyon. The Hopi also requested that consultations with the BLM be undertaken to discuss permanent protection and preservation actions for identified and unidentified sites in Arch Canyon, and invited the BLM to attend a Hopi administrative meeting at Kykotsmovi, Arizona .

In a letter to the BLM MFO dated February 26, 2007, the Navajo Utah Commission stated that on February 14, 2007, it passed Resolution NUCFEB-392-07 requesting that the BLM protect the Navajo aboriginal lands in and near Arch Canyon and the natural and cultural resources of these lands from the damages and impacts caused by continued off-highway vehicle use. Arch Canyon was part of the homeland of Chief Manuelito and his brother Nabiih Kaa yi lii, and their descendants who are members of the Bitahnii clan [Navajo Utah Commission (NUC) 2007].

5.4.2 Zuni Tribe

In 2010, the BLM had discussions with the Zuni at a face-to-face meeting about the Duck Stick site (Zuni Tribe 2010a). In a subsequent telephone conversation (Zuni Tribe 2010b), the Zuni indicated they thought the Black Bear Cave site was probably very important and requested photographs and further consultations with Zuni elders.

6.0 Table 2. BLM Response to Specific Contentions in the Petition.

CONTENTIONS				
Contention #	Page #	Resource	Contention	Response to Contentions
1	vi	Cultural Resources	The vast majority of cultural resources in and near Arch Canyon has not been documented, has no protective management prescriptions in place, and is at risk from intentional and inadvertent damage.	The vast majority of sites in southeastern Utah have not been documented. The area is now closed to cross-country travel and has several protective management decisions in place (see response to contention # 4). Sites in the BLM MFO are protected by various cultural resources laws and regulations and patrols by law enforcement, BLM staff, volunteers, and Site Stewards. All sites are at varying degrees of risk for damage.
2	vi	Cultural Resources	The ORV route in Arch Canyon has resulted in increased damage and adverse impacts to Arch Canyon's cultural resources, including wanton vandalism, illegal collecting of artifacts, and inadvertent damage by visitors unaware of proper site etiquette.	As Spangler (Spangler 2006) states, "there is limited evidence that ORVs are causing damage to cultural resources inside Arch Canyon (as mentioned above, the individuals utilizing ORVs to access sites may be causing additional adverse impacts". There is no evidence that any damage to cultural resources was done by people using OHVs. Hikers, bicyclists, and equestrians may be responsible for the damage observed.
3	vi and vii	Cultural Resources	Jerry Spangler, a professional archaeologist, has studied the relationship between motor vehicle access to cultural sites and damage to cultural resources and provides data which suggests that individuals engaged in illegal activities use mechanized vehicles to arrive at their targeted sites, and that illegal activities typically occur within 200 meters of an existing road. Jerry Spangler, <u>Site Condition and Vandalism Assessment of Archaeological Sites, Lower and Middle Arch Canyon, San Juan County, Utah</u> (October 2006) is attached as Exhibit B.	Not all impacts are due to OHV use as vandalism has and is happening to cultural resources where people have to walk, ride mountain bikes, or ride horses in order to access sites.
4	vii	Cultural Resources	Mr. Spangler recently conducted two on-the-ground surveys of the cultural resources in Arch Canyon from which he re-documented	The BLM has, since the time of the Petition, made several important management changes as described in the 2008 BLM Monticello Field Office Record of Decision (ROD) and Approved

			<p>nine previously recorded sites and discovered fourteen new sites. From these surveys he concludes that: Cultural resources in Arch Canyon area will continue to deteriorate without an aggressive management plan that includes public outreach, limitations on vehicular access, site stabilization and better management of pedestrian traffic on and around significant sites. Mr. Spangler further states that all of the sites that he examined and identified are recommended eligible for the National Register of Historic Places.</p>	<p>Resource Management Plan (RMP).</p> <p>OHV use has been limited to the designated route up to the USFS boundary year-round.(RMP TM-16)</p> <p>Domestic pets and pack animals will not be allowed in cultural sites or on archaeological resources as defined in the Archaeological Resources Protection Act (ARPA). (RMP CUL-18)</p> <p>Ropes and other climbing aids will not be allowed for access to cultural sites or archaeological resources as defined in ARPA, except for emergencies and administrative needs. (RMP CUL-19)</p> <p>Camping will not be allowed within cultural sites or archaeological resources as defined in ARPA.(RMP CUL-20)</p> <p>Cultural sites may be closed to visitation when they are determined to be at risk or pose visitor safety hazards.(RMP CUL-21)</p> <p>The riparian area is managed as No Surface Occupancy (NSO) for oil and gas leasing and as a result is closed to all other surface disturbing activities.</p> <p>The Cedar Mesa SRMA requires the preparation of a detailed management plan for providing recreation opportunities and protecting cultural resources.</p>
5	viii	Cultural Resources	<p>Based on Mr. Spangler's survey work he estimates that there could be in excess of 100 sites located along the approximately eight and one-half (8.5) miles of BLM-managed lands in Arch Canyon, with the majority of sites located along the base of the first cliff level and along the first bench above the floor of the canyon. The many undocumented cultural sites in Arch Canyon bear out the recent findings reported by the National Trust for Historic</p>	<p>Mr. Spangler's estimate was based mainly on observations in and from the canyon bottom. Additional Arch Canyon visitation by two BLM archaeologists in 2010 suggests that there are more sites in the cliffs on various ledges extending from the bottom to the top of the canyon. It is not unusual to have multiple sites in small, almost vertical sections of sandstone canyons. There are certainly many unrecorded sites. Restraints of time, money, and staff, and safety issues involved in accessing sites in the cliffs, make it very difficult to inventory large areas or even small areas unless there is a specific action to respond to for cultural</p>

			<p>Preservation that only six percent (6%) of BLM-managed lands have been surveyed for cultural resources. National Trust for Historic Preservation, <u>Cultural Resources on the Bureau of Land Management Public Lands</u> authored by T. Destry Jarvis, President, Outdoor Recreation and Park Services, LLC (May 2006, attached as Exhibit C. And, although “approximately 263,000 culturally-significant sites have been found [on BLM-managed lands] and archaeologists think that there may be 4.5 million not yet identified – much less protected, preserved, monitored, and interpreted.” Richard Moe, President of the National Trust for Historic Preservation, Address to the City Club of Denver, <u>Historic Preservation: An Unfinished Agenda in the West</u>, (May 16, 2006), attached as Exhibit D.</p>	resources inventories..
6	xi	Cultural Resources	<p>Mr. Spangler is particularly concerned that BLM does not know how many or what types of sites exist in Arch Canyon: Current BLM management strategies are predicated on previous research that was clearly inadequate, and little effort has been expended to determine the nature, density and distribution of sites throughout the canyon. The degradation of significant sites clearly eligible for the National Register of Historic Places remains a serious problem that warrants aggressive management.</p>	<p>Arch Canyon is included in the Cedar Mesa SRMA which requires the preparation of a detailed management plan for providing recreation opportunities and protecting cultural resources. Management actions to consider in this plan may include additional inventories to determine the number and types of sites and their significance in order to prioritize preservation efforts in the most appropriate way.</p>
7	xi	Cultural Resources	<p>Based on the significance of the sites documented by Mr. Spangler, the estimated number of undocumented sites in Arch Canyon, and the fact that BLM is allowing ORV use in Arch Canyon – potentially in very close</p>	<p>Trails off the designated route have been closed by the BLM (see response to contention # 4). The 2009 Class III inventory (Larmore and Croll 2010) of the entire 8.5 miles of the route did identify one site with minimal direct impacts from OHV use in the designated route. The route goes through less than</p>

			<p>proximity to cultural resources – Mr. Spangler strongly recommends that BLM restrict ORV use in Arch Canyon: Given the potential for significant numbers of undisturbed archaeological sites of National Register significance in the Arch Canyon drainage, the BLM should restrict vehicular access in Arch Canyon to administrative, law enforcement, and research purposes only as an appropriate strategy to protect the long-term integrity of sites. All trails, especially those into sensitive areas with potential cultural deposits, should be closed and the closures enforced. “The archaeological values evident on the slopes below architectural sites and along the edges of the floodplain – all areas accessible to mechanized vehicles – remain poorly understood and have not been adequately documented. <u>There remains a high potential that at least one major site with National Register eligibility could be directly impacted by off-road activities in the future. It is anticipated that additional sites will be located along the existing ORV route and could be directly impacted by vehicular activities.</u></p>	<p>1% of the site and only one artifact was observed directly in the OHV route.</p>
17	3	Cultural Resources	<p>The vehicle route that leads up the bottom of Arch Canyon provides easy access to many archaeological sites. The abundance of visually impressive archaeological sites combined with this easy vehicular access has resulted in greater levels of public visitation than is evident elsewhere in the region. This, in turn, appears to have resulted in much greater levels of adverse impacts to cultural resources, including</p>	<p>As shown by Winston Hurst’s 2010 draft report, sites near the mouth of Arch Canyon have had the greatest amount of adverse impacts. These sites have access by all kinds of vehicles, hikers, and equestrians and are a short distance along a graveled road (approx. 2 ½ mi.) from a paved highway and the Comb Wash campground. This is a very different situation than sites located in the canyon. The evidence of impacts is greatly reduced further inside the canyon and those limited impacts cannot be attributed to OHV use.</p>

			wanton vandalism, illegal collecting of artifacts, and inadvertent damage by visitors unaware of proper site etiquette.	Maximum visitation in April 2009 by vehicles averaged 10 vehicles per day. Because of a long winter in 2010, the maximum visitation occurred in May and averaged 8 vehicles per day. See response to contention # 2.
18	4	Cultural Resources	There is an extremely high potential for unidentified and undocumented cultural sites and related prehistoric middens to exist along the ORV route in the bottom of the canyon in the floodplain. Such sites are at risk of damage from ORVs both along the main route and on the spur routes that have been created to access cultural sites near the benches.	The 2009 Class III inventory (Larmore and Croll 2010) identified one site that was being minimally directly impacted. See response to contention # 7. The middens of the other sites are several meters or feet away from the route. One site has an artifact scatter close to the route which might be used to follow artifacts to the main part of the site. As stated above, spur routes off of the OHV route have been closed by the BLM. (See response to contention # 4.)
19	4	Cultural Resources	Unfortunately, the vast majority of the cultural resources in and near Arch Canyon have not been documented. Thus, BLM and the scientific community do not have a record of the resources that are present and, therefore, will not know what resources are eventually lost due to pot-hunting, looting and/or collecting.	See response to contention # 6.
44	9 and 10	Cultural Resources	Rather than conduct comprehensive and thorough surveys to determine how best to rehabilitate the damage that had been caused to the natural and cultural resources as a result of the ORV route, the BLM decided to create and, for all practical purposes, designate a new ORV route in Arch Canyon.	No new OHV route has been created. The designated route is a long established, existing route.
47	10	Cultural Resources	BLM's unilateral decision to allow ORV signs and surface disturbing work in Arch Canyon fail to comply with the environmental review and public participation requirements of the National Environmental Policy Act, 42 U.S.C. §§ 4231 <i>et seq.</i> and consultation requirements of the National Historic	Work was done under an emergency situation after a major flood in the canyon occurred in October of 2006. The flood damage presented risks to human safety and resources. Work was done in the active floodplain and a previously naturally disturbed area. This work was considered maintenance of an existing road and any surface disturbance was conducted within the

			Preservation Act, 16 U.S.C. §§ 470 <i>et seq.</i>	existing disturbance. Therefore, NEPA and NHPA do not apply.
50	14 and 15	Cultural And Riparian Resources, Fisheries	SUWA bases this petition on the significant adverse effects that ORV use is causing or will cause to cultural resources, riparian and wetland resources, and to fish and wildlife and their associated habitats.	There is no evidence of significant adverse effects to cultural resources, riparian, and fish and wildlife habitats by OHV use.
51	15	Cultural Resources	According to the BLM's own reports, the "threat to BLM's cultural resources has developed into a crises... If urgent steps are not taken now, this time period may well be viewed, in retrospect, as the turning point that relegated these non renewable resources to the mantelpiece of posterity" BLM 2000 Strategic Paper on Cultural Resources "At Risk" Exhibit I.	Vandalism, looting, illegal artifact collection, graffiti, direct vehicle impacts and other adverse impacts do continue to be a widespread and ongoing problem in some areas, however, the evidence for this in Arch Canyon is very limited.
52	18	Cultural Resources	As discussed in Jerry Spangler, <u>Site Condition and Vandalism Assessment of Archaeological Sites, Lower and Middle Arch Canyon</u> , San Juan County, Utah, (October 2006)("Archaeological Sites in Arch Canyon"), Arch Canyon has two qualities that, in tandem, are particularly rare to this region: (1) a perennial water source that appears to have been the focus of intense prehistoric occupations by Ancestral Puebloan farmers, resulting in spectacular architectural remains along the canyon bottom and at various higher cliff levels, and (2) a route through the bottom of the drainage that provides easy vehicular access to many of the archaeological sites. Unfortunately, the "abundance of visually impressive archaeological sites combined with vehicular access has precipitated greater levels of public visitation than is evident elsewhere in the region, and	See response to contention # 17. Greater levels of visitation than those at Arch Canyon are occurring in several

			this in turn appears to have resulted in much greater levels of adverse impacts to cultural resources, including wanton vandalism, illegal collecting of artifacts and inadvertent damage by visitors unaware of proper site etiquette." <i>Id.</i> At 1, attached as Exhibit B.	other locations in the region including Butler Wash/Comb Ridge, Grand Gulch, and Moon House.
53	18 and 19	Cultural Resources	Despite a relative wealth of research conducted in the Cedar Mesa region, the Arch Canyon corridor has not been subjected to quantitative or qualitative scientific inquiry and no comprehensive or systematic efforts have been initiated to identify sites within the Arch Canyon drainage or integrate Arch Canyon within broader discussions of prehistoric human behavior in the region. <i>See id.</i> At 1-5.	There has been a lack of proposed actions in Arch Canyon which would prompt Class III inventories conducted under Section 106 of the National Historic Preservation Act. Winston Hurst's BLM funded 2010 Class III report does integrate the sites at the mouth of Arch Canyon with regional prehistory. BLM also funded a Class III inventory of the entire 8.5 mile route in 2009 and a draft report was produced in 2010.
54	20	Cultural Resources	Based on Mr. Spangler's survey work, he estimates that there is potential for a site density of 17 prehistoric sites per linear mile and that sites will be found on both sides of the canyon in relative proximity to the floodplain. In other words, there could be in excess of 100 sites located along the approximately eight and one-half (8.5) miles of BLM-managed lands in Arch Canyon, with the majority of sites located along the base of the first cliff level and along fist bench above the floor of the canyon. <i>Id.</i>	See response to contention # 5.
55	20	Cultural Resources	⁸ Many of the new sites documented by Mr. Spangler have very significant features, which are detailed in his report, but will not be discussed in detail in this Petition in order to protect these sites.	No response.
56	21	Cultural Resources	Mr. Spangler's Arch Canyon report emphasizes that although many of the sites are badly deteriorated, all of the sites examined during the course of his site analysis are	This is common for sites naturally deteriorated and sites that have had extensive adverse impacts caused by people in recent times. Rarely does a site totally lose its eligibility.

			recommended eligible for the National Register of Historic Places under one or more criteria.	
57	21	Cultural Resources	All 24 sites are eligible under Criterion A inasmuch as they collectively contribute to a broad understanding of Ancestral Puebloan prehistory during Pueblo II and Pueblo III times, particularly as it related to human adaptations in the Cedar Mesa and Cockscomb areas. This adaptation was characterized by small agricultural groups who exploited the limited sources of permanent water and arable lands, and who aggregated and dispersed through time in response to various social and environmental variables. Most sites in Arch Canyon reflect occupations by small nuclear and extended family units living in close proximity to Arch Canyon Creek. However, other sites [] reflect population aggregations into defensive postures 100 to 200 meters above the floodplain, and the projection of food resources in inaccessible localities, as indicated by [].	Eligibility determinations have not been finalized per 36 CFR § 800.4(c) (1) and (2) and are recommendations at this point.
58	21 and 22	Cultural Resources	All but three sites are also eligible under Criterion C inasmuch as these sites reflect distinctive characteristics of Ancestral Puebloan architecture evident throughout the region from about A.D. 1100 to 1300 (Pueblo II to Pueblo III times). These high architectural values, characterized by exceptional stone and adobe masonry construction that has survived more than seven centuries. [] could be reflective of and organized system of beliefs, practices and traditions representing mankind's relationship to	See response to contention # 57.

			<p>perceived supernatural forces. The relationship maybe further represented by rock art panels at []. Although some sites are badly deteriorated, these remnants are likewise significant in that each of them represents a significant and distinguishable entity whose components lack individual distinction, but which collectively contribute to a broader perspective of land use patterns through time.</p>	
59	22	Cultural Resources	<p>Most importantly, all 24 sites are eligible under Criterion D in as much as they have significant potential to yield information important in prehistory. As discussed above, extremely little research has been conducted into prehistoric manifestations in the Arch Canyon drainage, and little is known about how prehistoric agriculturalists adapted to this arid environment. Most evidence, based on architectural and ceramic cross-dating, is indicative of a population florescence during Pueblo II and Pueblo III times, a period of tremendous social and environmental stress that prompted widespread population aggregations and dispersal, eventually culminating in abandonment of the area in the decades prior to A.D. 1300. Sites in Arch Canyon offer significant potential to researchers attempting to explain how prehistoric groups responded to social and environmental changes through time, and to explain why agricultural life ways were abandoned after thriving for many centuries. It is highly probable that subsurface deposits in this locality will also yield new insights into prehistoric</p>	See response to contention # 57.

			groups who occupied the canyon prior to the Pueblo II-Pueblo III florescence, and later hunter-gatherers who superseded them. <i>Id.</i> At 41 (emphasis added).	
60	22	Cultural Resources	Mr. Spangler's fieldwork and analysis underscores the importance of Arch Canyon's cultural resources to a greater understanding of Ancestral Puebloans lives and agricultural practices. Preservation of these resources should be paramount to BLM to study and eventually related to a more complete story of prehistoric agricultural practices, and social and historical changes that occurred over time.	No response.
61	22 and 23	Cultural Resources	Various studies, including those funded by BLM, have concluded that motor vehicles facilitate the work of pothunters and vandals, and the ease of access afforded by the use of motorized vehicles has led to an increase in vandalism and greater damage to archaeological resources. See <u>A Survey of Vandalism to Archaeological Resources in Southwestern Colorado</u> , Paul R. Nickens, Signa L. Larralde, And Gordon C. Tucker, Cultural Resources Series No. 11, BLM (1981); and <u>Pothunting in Central Arizona: the Perry Mesa Archaeological Site Vandalism Study</u> , Richard V.N. Ahlstrom, Cultural Resource Management Series No. 13, BLM and USFS (1992), <i>cited in</i> , Southern Utah Wilderness Alliance, Preserving History, at 16 (2002) attached at Exhibit J. These studies conclude that there is little question that cultural sites that are not easily accessible to ORVs are more likely to	There is no recent evidence of looting at sites in Arch Canyon with the possible exception of a hearth which appears to be deeper than it was in 2006 (Naylor 2010) and above in this report, p.7). Recent BLM investigations concerning looting and the illegal sales of artifacts showed that some looters prefer road-less areas so others won't happen upon them doing illegal activity.

			retain their integrity and their value to science.	
62	23	Cultural Resources	Not surprisingly, Mr. Spangler notes that his recent research at Range Creek confirm conclusions of the previous studies. See Spangler at 42. In particular, the Range Creek research demonstrates that there is a direct relationship between unrestricted vehicular access and site vandalism. Cultural Resources inside the vehicle restriction areas have significantly less evidence of adverse impacts caused by illegal or inappropriate human activities, where as cultural sites located where there were no vehicle restrictions have been seriously damaged and in some cases destroyed. Generally, illegal activities occurred within 200 meters of an existing road. See <i>id.</i>	OHV use is restricted to the route and monitoring by the BLM shows that users are not going off of the route this year. See response to contention # 61.
63	23 and 24	Cultural Resources	A former BLM Law Enforcement Ranger and Special-Agent-in-Charge who has over 25 years of experience in the field, including archaeological surveillances in southeastern Utah, and specialized in cultural resource crimes and related actions has "witnessed hundreds of archaeological sites impacted by off-road motorized vehicle use- particularly on the public lands in the California desert and in Southeast Utah." Declaration of Lynell Schalk, ¶ 8, attached as Exhibit M. These impacts included running over sites, looting vandalism, collecting and unintentional damages. See <i>id.</i> ¶ 10. Significantly, Ms. Schalk's observations are that "[s]ites that are closer to roads or trails are invariably more looted and trashed than sites in remote or inaccessible areas." <i>Id.</i>	Direct impacts to cultural resources by OHV use in Arch Canyon are limited and there has been no other evidence of indirect impacts that can be attributed to OHV use or OHV users. See response to contentions # 2 and 7.

64	24	Cultural Resources	Closely tracking the results of Mr. Spangler's study in Range Creek, Ms. Schalk's observation from her many years of services with the BLM is that "damage to cultural resources – intentional, malicious damage as well as inadvertent damage – is greater in areas in which ORV use is permitted than in the areas where ORV use is prohibited." <i>Id.</i> ¶ 9.	See response to contention # 2.
65	24	Cultural Resources	Ms. Schalk states that she is "not aware of any ATV users who have ever reported archaeological damage to the BLM authorities. Most reports of archaeological site looting or damage [] are reported by hikers and backpackers," and that these user groups have less adverse impacts on cultural resources. <i>Id.</i> ¶ 11.	BLM has had OHV users report vandalism. In Arizona, OHV groups have monitored sites for the BLM.
66	24	Cultural Resources	Since all sites documented by Mr. Spangler in his recent Arch Canyon report are recommended eligible for the National Register, and given that there has been no comprehensive efforts to document the cultural resources that are present in Arch Canyon that could be impacted by ORV use, Mr. Spangler recommends that the canyon be closed to motorized vehicles. Such closure would help protect the undocumented and likely significant sites on the canyon floor: The archaeological values evident on the slopes below architectural sites and along the edges of the floodplain – all areas accessible to mechanized vehicles – remain poorly understood and have not been adequately documented. There remains a high potential that at least one major site with National Register eligibility could be directly impacted by off-road	See response to contention # 7.

			activities in the future []. It is anticipated that additional sites will be located along the existing ORV route and could be directly impacted by vehicular activities.	
67	25	Cultural Resources	It is [] anticipated that closer inspection of the floodplain and adjacent slopes will identify agricultural features, middens, and special use locales that will provide a broader understanding of human adaptations in the region. BLM land management decisions should be predicated on a scientifically sound database, although such a database currently does not exist. The BLM cannot properly take into account potential adverse effects if it does not know what those resources are. <i>Id.</i> at 42, 422 (emphasis added).	BLM agrees with the first sentence of the contention. A Programmatic Agreement (PA) is commonly used to deal with unknown cultural resources in areas where Class III inventories have not been completed. An approved PA establishes a set of procedures that is acceptable to the State Historic Preservation Office and Tribes for the management and treatment of cultural resources.
68	25	Cultural Resources	Archaeological sites in the Cedar Mesa region have long been the target of malicious destruction of architecture and illegal excavations in search of valuable artifacts. See Spangler at 1.	This comment is true not only for Cedar Mesa but, the entire Ancestral Puebloan/Anasazi area.
69	25	Cultural Resources	Given the ORV route that provides easy access to Arch Canyon, it would be expected that sites in this drainage have suffered significantly from these illegal activities. Mr. Spangler's recent work in Arch Canyon concludes that sites in the lower and middle sections of Arch Canyon have been degraded to varying degrees from inadvertent and malicious acts.	Some sites have had some impacts from people. The affected sites have not been degraded to a high degree.
70	25	Cultural Resources	In particular, in Arch Canyon Mr. Spangler notes that: The CPAA analysis found that four of 19 sites examined had evidence of looter's holes, all of them small and none of them impacting overall site integrity or National Register eligibility. These looters holes range from 20 to 50 centimeters in diameter and	The contention supports the conclusion that sites have not had a high level or degree of looting and the integrity of the sites is intact. Badgers, dogs, and other animals regularly dig holes in sites that can appear to be looters' excavations. The comment assumes that the 1965 observers used the same standard for

			typically range from 10 to 30 centimeters in depths, suggesting that looting activities occurred in the past and the holes have largely filled through natural erosion. It should be noted that only one of the eight sites directly examined in 1965 exhibited evidence of vandalism, and even that evidence was considered marginal. This suggests the vandalism observed in 2006 has occurred over the past four decades.	evidence of vandalism as was used in 2006. The contention suggests that the vandalism was done in the early part of the time span between 1965 and 2006 and there has been no recent looting.
71	25 and 26	Cultural Resources	Without a detailed catalog of artifacts on any given site, any determination of the extent of illegal surface collecting becomes an intuitive exercise. However, two lines of circumstantial evidence suggest that surface collecting is a serious problem in the Arch Canyon area. First, artifacts are typically concentrated on the slopes directly below residential occupations. In the Cedar Mesa generally, these middens may contain thousands of individual artifacts. However, middens at the Arch Canyon sites are extremely sparse, containing only a few lithic flakes and one or two potsherds. The areas around the structures are almost devoid of artifacts, suggesting even small lithic waste flakes have been removed.	This contention does not take into consideration the complete history of archaeological investigations which is outlined in Winston Hurst's 2010 report. In that report, it is stated that archaeologists from at least the 1950s and the 1960s were making surface collections of artifacts on sites in Arch canyon. In one instance, 101 potsherds were collected from one site. Another factor that takes place on sites is the intentional "hiding" of artifacts by people who want to ensure that the artifact(s) remain at the site.
72	26	Cultural Resources	Evidence of surface collecting is also suggested by the negative evidence observed at [], a previously unrecorded site (possibly a large kiva) located immediately adjacent to the ORV route in the canyon bottom. Despite its proximity to the route, the site is obscured by pinyon and juniper trees, and modern visitation appears to be minimal (some rusted tin cans	A review of the site form for the first site described in the contention revealed that the large kiva is 30 m. or 100 ft. from the OHV route, not "immediately adjacent" as stated in the contention. The OHV route is also the hiking, biking, and equestrian route and site visitation by others than OHV users is a regular occurrence according to visitor registration records.

			<p>on the site suggest it may have been a temporary campsite at one time). Compared to the sites that are clearly visible from the ORV route, all have a paucity of artifacts, site [] contains an abundance of chipped stone, groundstone and ceramic artifacts, including large painted potsherds highly prized by surface collectors []. Ceramic evidence is abundant at [], a structure that is visible from the road. However, the artifacts are not located in direct association with the structure and appear to have escaped detection. Also, at least four highly unusual wooden artifacts, bone and corncobs were observed in plain view at [], which is also not visible from the road. The presence of collectible artifacts at these three sites implies that recreational visitation and its co-occurring problem of surface collecting is directed at easily visible sites, but that sites not readily visible remain relatively intact. <i>Id.</i> At 34-36 (emphasis added).</p>	
73	26	Cultural Resources	<p>Mr. Spangler observes that ORVs are mechanically capable of providing easy and efficient access to areas without official road access and that; indeed, they have had direct adverse effects on Arch Canyon's cultural resources. In addition, [T]he peripheral impacts of ORVs on archaeological sites are substantially greater. At least eight sites have ORV routes leading from the main route to the base of the slope directly below the sites. These routes vary from rarely used trails where crushed vegetations is slowly recovering to major spur routes leading to campfire rings. along the</p>	See response to contention # 7.

			<p>alluvial floodplain. All of these routes terminate at topographical features that have a moderate to high potential to contain buried cultural deposits (e.g., potential middens areas). In at least two instances, artifacts were observed within 5 meters of a vehicular access route. As was observed in October 2006 after a series of rainstorms, these ORV routes facilitate sever erosion that could seriously erode subsurface cultural deposits_It should also be noted that not systematic surveys have been conducted of the alluvial areas now being impacted by ORV use, and the little is known of the spatial relationship of alluvial areas to adjacent residential and storage sites. <i>Id.</i> at 38 (emphasis added).</p>	
74	27	Cultural Resources	<p>Owning to the significance of the documented cultural sites, and the estimated number and likely significance of the undocumented cultural resources that exist in Arch Canyon, as described and analyzed in Mr. Spangler's report and discussed above, it is imperative that BLM take immediate action to protect these resources. Given that all of the sites discussed in Mr. Spangler's report are recommended eligible for the National Register, federal land management strategies should reflect the agency's commitment to preserve cultural resources of significance to all Americans and to protect inherent values of spatial context and aesthetics in a manner that does not diminish the integrity of the property's location, design, setting, materials, workmanship, feeling or association.</p>	<p>The BLM will consider this contention and all available information in reaching a decision for the Petition.</p>

75	27	Cultural Resources	BLM must undertake more comprehensive efforts to document the cultural resources that could be impacted; more aggressive planning efforts to avoid, minimize and mitigate adverse effects to cultural properties; and a more detailed analysis of adverse impacts. It is imperative the agency take immediate steps to protect the outstanding cultural resources of Arch Canyon and to prevent further adverse impacts to these resources.	See response to contention # 6. The completion of the BLM RMP was an important step for the protection of cultural resources in Arch Canyon.
76	28	Cultural Resources	Mr. Spangler makes the following specific recommendations, based on his fieldwork, and professional experience in other areas of the state with significant cultural resources: 1) Given the potential for significant numbers of undisturbed archaeological sites of National Register significance in the Arch Canyon drainage, the BLM should restrict vehicular access in Arch Canyon to administrative, law enforcement and research purposes only, as an appropriate strategy to protect long-term integrity of sites in all areas above [the signed and fenced site] at the mouth of the canyon. All trails, especially those into sensitive areas with potential cultural deposits, should be closed and the closures enforced. The archaeological values evident on the slopes below architectural sites and along the edges of the floodplain – all areas accessible to mechanized vehicles remains a high potential that at least one major site with National Register eligibility could be directly impacted by off-road activities in the future. It is	BLM will consider these recommendations for a future management plan for the Arch Canyon portion of the Cedar Mesa SRMA.

			anticipated that additional sites will be located along the existing ORV route and could be directly impacted by vehicular activities.	
77	28	Cultural Resources	As demonstrated by vandalism research in Range Creek Canyon in eastern Utah, (Spangler, Arnold and Boomgarden 2006), there is a direct relationship between unrestricted vehicular access and site vandalism. Areas inside the Range Creek controlled access points had significantly less evidence of adverse impacts caused by illegal or inappropriate human activities, whereas cultural sites located outside controlled access points have been seriously damaged and in some cases destroyed. These data suggest that individuals engaged in illegal activities use mechanized vehicles to arrive at their targeted sites, and that illegal activities typically occur within 200 meters of an existing road.	No response.
78	28 and 29	Cultural Resources/ Recreation	2) The BLM should implement a permit system that requires Arch Canyon visitors to identify themselves by name and address and/or limiting the number of visitors in the canyon on any given day. A similar permit system has been employed in other areas of southeastern Utah, and both strategies were recently employed in Range Creek Canyon where they have produced notable results. Visitors are less likely to engage in illegal or inappropriate behavior if their names are on an official register. And in Range Creek, the limited access has promoted a greater awareness among visitors as to the sensitive nature of cultural resources, and it has also afforded law	See response to contention # 76.

			<p>enforcement an opportunity to disseminate appropriate information about site etiquette. It should be noted that the success of this effort in Range Creek Canyon is predicated on a consistent law enforcement presence in the canyon (Spangler, Arnold and Boomgarden 2006)</p>	
79	29	Cultural Resource	<p>3) The BLM should clearly identify preferred pedestrian routes to archaeological sites that avoid potential midden areas and exposed artifacts. Several heavily visited sites have multiple foot trails, many in areas of potential sensitivity for cultural resources. Ceramic artifacts are visible on or near two of these foot trails, suggesting the potential for degradation of subsurface deposits is significant. Preferred pedestrian routes should include signage regarding surface collecting, restacking walls, concentrating artifacts into piles and climbing on or through architecture. Access to structures on narrow ledges should be prohibited inasmuch as access to these features poses serious safety risks and potential for structural degradation due to leaning against or pulling on walls for support.</p>	See response to contention # 76.
80	29	Cultural Resources	<p>4) A greater BLM presence in the canyon would promulgate a greater public awareness of the importance of site preservation. Given the agency's budgetary restrictions, the BLM should see the assistance of</p>	See response to contention # 76.

			commercial tour operators, site stewards and volunteer organizations with a vested interest in the long-term preservation of the canyon's resources. This should include training requirements for commercial tour operators and outfitters to ensure proper site etiquette, and written materials should be disseminated to all canyon visitors as a means to promulgate the importance of these resources to all Americans.	Commercial tour operators and outfitters are given information by the BLM on proper site etiquette
81	29	Cultural Resources/ Recreation	5) A consistent and clear message of site preservation and ethics must be implemented to promulgate proper protection of cultural resources for future generations. BLM efforts toward this end have been thwarted by the theft of signage, and although deplorable, it does not exonerate the agency of its responsibility to promote the preservation of cultural sites. Appropriate educational and preservation messages should be disseminated at selected locations of high visitation, including but not limited to the trail heads, at major sites. Currently, a checklist of intended activities filled out by visitors at the BLM kiosk at the mouth of the canyon includes a generic "collecting" category. This is confusing and could be construed by some to mean that surface collecting of cultural materials is an appropriate activity. Appropriate activities should be clearly specified, and the collecting category deleted.	See response to contention # 76.
82	29 and 30	Cultural Resources	6) The BLM should initiate consistent site monitoring to better determine the nature of illegal collecting and the cumulative effects of site degradation. The apparent	See response to contention # 76.

			absence of photographic database and detailed IMACS forms has inhibited detailed assessments in the past. A regular monitoring program could assist land managers in the development of strategies to quantify sites degradation and to develop strategies to mitigate and repair damage to sites.	
83	30	Cultural Resources	7) Previous efforts to document the spatial distribution of archaeological sites in Arch Canyon are clearly inadequate and the quality of this research does not reflect current scientific standards. During the course of relocating nine previously recorded sites, five additional sites were identified by CPAA in April 2006, and nine additional sites were identified in October 2006 in a concentrated area of the canyon. Additionally, at least three previously recorded sites had significant features that were not mentioned in the initial forms. The identification of new sites and additional features was made with little effort, suggesting a more comprehensive effort (Class III) will identify significant numbers of additional sites within the canyon corridor. It is further anticipated that closer inspection of the floodplain and adjacent slopes will identify agricultural features, middens and special use locales that will provide a broader understanding of human adaptations in the region. BLM land management decisions should be predicated on a scientifically sound database, although such a database currently does not exist. The BLM cannot properly take into account potential adverse effects if it does not know	See response to contention # 76.

			what those resources are. Id. At 42-44 (emphasis added).	
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7.0 Conclusions and Recommendations

Based on a careful review of all the available information, I have concluded that that OHV use in Arch Canyon is not causing or threatening to cause considerable adverse effects (CAE) on cultural resources in the Canyon. This conclusion will be explained by facts presented below. In reaching this conclusion, a threshold was used for what are “considerable adverse effects”.

The first word, “considerable”, is defined as large in extent or degree. Consideration was given to the quantity and quality of any adverse effects and how they are related to specific cultural resources. The word, “adverse” is defined as being harmful, damaging, or presenting a loss. The word, “effects” is defined as multiple, separate, incidents of alteration to the characteristics of a historic property (both prehistoric and historic) qualifying it for inclusion in or eligibility for the National Register of Historic Places.

The word, “considerable” is not used in cultural resources laws and regulations. However, in order to make determinations concerning impacts to cultural resources, especially when dealing with conflicting points of view, it is necessary to establish a threshold for what might be a considerable adverse effect.

I have chosen the threshold for CAE as a site’s loss of significance. Significance is defined in the Code of Federal Regulations, Title 36, Part 60.4 which states:

The quality of significance in American history, architecture, archaeology, engineering and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. that are associated with events that have made a significant contribution to the broad patterns of our history; or*
- B. that are associated with the lives of persons significant in our past; or*
- C. that embody the distinctive characteristic of a type, period, or method of construction, or that represents the work of a master, or that possess high artistic values or that represents a significant and distinguishable entity whose components may lack individual distinction; or*
- D. that have yielded or may be likely to yield information important in prehistory or history.*

Sites meeting these criteria are significant and eligible for listing in the National Register of Historic Places. If an activity causes a site to lose its significance, that clearly is a CAE.

In this analysis, both direct and indirect effects will be considered. A direct effect by OHV use would be driving over significant cultural resources such as archaeological sites. If this results in damage to the qualities of the site that make it eligible for the National Register of Historic Places, then this would be a direct adverse effect. Indirect effects from OHV use are impacts that mainly result from people getting out of or off of their OHVs and doing things that affect sites. A proven method for ascertaining secondary effects from OHV use does not yet exist. Previous efforts to quantify indirect effects such as those in Range Creek Canyon, Utah (Spangler et al. 2006) are site specific with methodologies that are not necessarily applicable to situations such as Arch Canyon. Range Creek Canyon was private land with locked gates that excluded not only vehicles but pedestrians, equestrians, and bicyclists until the last few years. This has not been the case in Arch Canyon for decades. To adequately address such use, a long term monitoring effort in Arch Canyon would be required and impacts would have to be connected with OHV use exclusively.

The current evidence of direct effects in Arch Canyon by OHV use is limited. In the double component site (described in Section 5.3.2) through which the route passes, the route goes through the southwestern part of the site where there was observed a very sparse (8 artifacts) artifact scatter of sherds and lithics near (< 10 m. or 33 ft.) with one sherd directly in the route. No charcoal stains, features, or other remains were observed in the route or the adjacent southwestern area of the site by either the Class III contractor or the BLM. The features are located northeast of the route and have not had any discernable adverse effects. The route has gone through the site for decades and there is no evidence that it is disturbing any possible subsurface deposits. The direct impact of the OHV route is minimal to this cultural resource and, therefore, is not a CAE. A mitigation plan might include surface collection of artifacts in and near the route and placing rocks along the edge to ensure vehicles stay on the route.

The Arch Canyon site visited by the BLM in 2010 does have a spur road that has developed in recent years. The spur road goes through a midden area of the site and is causing impacts to the site. This non-designated spur route needs to be closed by BLM immediately. Although some adverse effects are occurring, they are not jeopardizing the integrity of the site to a degree that the site will lose its significance in the near future.

The area of Arch Canyon containing sites that approach CAE is the mouth of the Canyon. Although some of these sites have had extensive adverse effects, Winston Hurst has recommended that they all retain significance and are eligible for the National Register of Historic Places. As discussed above in this report, the situation at the mouth of the canyon is very different from that of the interior.

Winston Hurst observed ATV tracks going directly through another site in the mouth of Arch Canyon area. This appears to be a single event that occurred in the past. The sites in the mouth of Arch Canyon need to be monitored on a regular basis to stop any on-going impacts.

The main evidence of adverse effects presented in the Petition is from the 2006 Spangler report and to-date, there is no evidence to conclude that these indirect adverse effects are from OHV use. Mr. Spangler states that 15 of 19 sites had a paucity of artifacts on the surface. This paucity of artifacts he suggests is due to the sites having been illegally collected. As stated in section 6.0, Table 2, Response to Specific Contentions in the Petition, contention # 71, it is a recorded fact that professional archaeologists from the 1950s and 1960s made surface collections of artifacts at some sites in Arch Canyon. Mr. Spangler does say that the paucity of artifacts is possibly due to temporary or seasonal occupations (Spangler 2006). The practice of “hiding” artifacts to ensure that they remain at the site could also be a factor. If artifacts have been illegally collected, the adverse impact cannot be attributed to OHV use. All 15 sites were recommended eligible or significant for the National Register of Historic Places or significant by Mr. Spangler, which suggests that the impacts were not severe. None of the sites have a CAE.

The four looted sites that Mr. Spangler observed have small holes that he says do not affect site integrity or eligibility for the National Register of Historic Places. Mr. Spangler says the looting does not appear to be recent, but probably occurred between 1965 and 2006. There is no CAE due to looting, and if there were, it could not be attributed to OHV use.

The graffiti observed by Mr. Spangler at three sites does not appear to be recent and may qualify as a cultural resource if more than 50 years old. The inscriptions and signatures in Grand Gulch and other locations in the Cedar Mesa area have been invaluable in understanding the local history. Again, if some of the graffiti is recent, it is minimal and does not constitute a CAE. The graffiti cannot be attributed to OHV use.

Mr. Spangler did observe some other adverse impacts such as fire rings and charcoal from camping in sites, rebuilt walls, and a climbing bolt left in a cliff. These impacts are not at a CAE level because the affected sites have retained their significance.

The 8 sites that had spur roads (now closed) leading to them may have had some adverse effects to cultural resources by reason of such spur roads. Twenty three of the 24 sites Spangler studied were inaccessible to OHVs. The potential for OHV direct adverse impacts exists at only four of the total 38 known sites and with appropriate measures such as rock placement, brush barriers, and signage, any future impacts that might occur should not result in CAE to cultural resources.

The new information on the Black Bear Cave, and other sites in the nearby cliffs is not directly pertinent to the issue of whether OHV use in Arch Canyon causes CAE to cultural resources since the access to the sites is from the rim of the canyon. It does, however, show that there are other significant sites that need management and that there are probably other unknown sites throughout the canyon.

The Duck Stick site is a very significant cultural resource that has not had any obvious adverse effects except for some pre-1992 (grazing excluded) cow dung that is still present. As of August 2010, this site is one of the Arch Canyon sites that will be monitored by site stewards on a

regular basis. The monitoring of this site will be included in a future management plan prepared for the Arch Canyon portion of the Cedar Mesa SRMA.

The evidence of unauthorized excavation of a hearth that BLM MFO archaeologist Laird Naylor noticed in 2010 is an adverse effect but, it is not at the CAE level. The site still retains its significance. Moreover, it is impossible to attribute the impact to OHV use.

Conclusion 1. OHV use is not causing CAE to cultural resources in Arch Canyon. The levels of adverse effects are minimal in the interior of the canyon and much more pronounced at the mouth of the canyon. There is no evidence that any sites have lost their significance. Provided that a management plan is developed and implemented using the recommendations below, OHV use will not cause CAE to cultural resources in the future.

Conclusion 2. Almost all of the adverse impacts to cultural resources are a result of activities probably done decades ago. The only two sites showing recent indirect adverse effects are the Laird Naylor multi-room cliff ruin (Naylor 2010) and the Black Bear Cave (see page 8 of this report).

Conclusion 3. It is impossible to say that the observed indirect adverse effects have anything to do with OHV use since hikers, bicyclists, and equestrians also use the same route in the Canyon and may be responsible for impacts.

Based on my review, I conclude that the contentions in the SUWA Petition concerning impacts to cultural resources in Arch Canyon from OHV use are not supported by the information discussed in this report. Consequently, from the standpoint of cultural resources, it appears that there is no reason to close the OHV route in the Canyon. I do recommend, however, that an additional Class III inventory be completed for all areas of Arch Canyon and a plan developed to manage human behaviors regardless of access means. The plan could use some of the management prescriptions the BLM has for other canyons and trails in the Cedar Mesa SRMA. These prescriptions might include, development of a Cultural Resources Management Plan (CRMP) for Arch Canyon, development of strong public awareness and site etiquette, increased monitoring by site stewards and BLM staff, utilization of a permit system to limit and control canyon visitation, restrictions on the use of campfires and the collection of wood, the disposal techniques of human waste, restrictions on camping locations, closure of some areas to overnight use, prohibiting pets, and designating trails to and through site areas. These actions will ensure that CAE to cultural resources will not happen in the future.

It is recommended that available BLM funding for the 2011 fiscal year be used as a foundation for a cultural resources inventory/planning effort in Arch Canyon.

/S/ Donald E. Simonis

BLM Monticello Field Office archaeologist

September 13, 2010